

WHAT IS CLAIMED IS:

1. A method of forming fine patterns comprising: covering  
a substrate having photoresist patterns with an over-coating  
5 agent for forming fine patterns, applying heat treatment to  
cause thermal shrinkage of the over-coating agent so that the  
spacing between adjacent photoresist patterns is lessened by  
the resulting thermal shrinking action, and removing the  
over-coating agent substantially completely by way of bring-  
10 ing thusly treated substrate into contact with a remover so-  
lution for over 60 seconds.
2. The method of forming fine patterns according to claim  
1, wherein the over-coating agent contains a water-soluble  
polymer.
- 15 3. The method of forming fine patterns according to claim  
2, wherein the water-soluble polymer is at least one member  
selected from the group consisting of alkylene glycolic poly-  
mers, cellulosic derivatives, vinyl polymers, acrylic poly-  
mers, urea polymers, epoxy polymers, melamine polymers and  
20 amide polymers.
4. The method of forming fine patterns according to claim  
1, wherein the over-coating agent is an aqueous solution hav-  
ing a solids content of 3 - 50 mass%.
5. The method of forming fine patterns according to claim  
25 1, wherein the heat treatment is performed at a temperature  
that does not cause thermal fluidizing of the photoresist  
patterns on the substrate.